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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,347	10/15/2004	Lennart Borjesson	HPX0061	4054

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EXAMINER	
NGUYEN, JIMMY T	
ART UNIT	**PAPER NUMBER**
3725	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/511,347	BORJESSON ET AL.	
	Examiner	Art Unit	
	Jimmy T. Nguyen	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/2/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-27* is/are allowed.

6)☒ Claim(s) *14-21 and 28-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

The amendment filed on February 02, 2006 has been entered and considered and an action on the merits follows.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-17, 19-20 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonald (US 2,355,091).

Regarding claim 14, McDonald discloses a screw compressor for compressing and separating liquid from matter that passes through the screw compressor, the screw compressor comprises: a screw (16) having a longitudinal direction (fig. 1) and an outer threading (fig. 1), the outer threading having a pitch (fig. 1), wherein the pitch decreases in the longitudinal direction of the screw (fig. 1); a casing (fig. 2) that encases the screw, the casing has an inner side that faces the thread on the screw so that matter can be fed forward through the screw compressor between the screw and the inner side of the casing in a direction from an inlet end (12) of the screw compressor where a pitch of the screw thread is greater (fig. 1), to an outlet end (see the right section of fig. 1) of the screw compressor where a pitch of the screw thread is smaller (fig. 1); appliances (29) on the inner side of the casing, that are arranged to prevent matter that passes through the screw compressor from rotating along with the screw (see page 4,

right column, lines 26-32); a conduit (38) for liquid supply arranged inside the screw and provided with a mouth (42) on the outside of the screw (see fig. 1) so that liquid can be fed through the screw and be supplied to matter that passes through the screw compressor, the mouth being arranged on the outer surface of the screw in order thereby to rotate along with the screw so that liquid that is supplied via the conduit is uniformly supplied to the matter that passes the screw compressor (fig. 1); McDonald discloses the screw compressor is arranged to press the liquid that is supplied to the matter via the mouth of the conduit axially backwards (47) in the longitudinal direction of the screw and towards the inlet end of the screw compressor. As to the amended limitation "wherein the screw compressor is arranged so that the liquid that is supplied to the matter that passes through the screw compressor is pressed axiallv backwards through the screw compressor towards the inlet end of the screw compressor", McDonald discloses the screw compressor in an arrangement as claimed, therefore the liquid is being pressed axially backward towards the inlet end when the liquid contacts a right inner end wall of the screw (16).

Regarding claim 15, McDonald discloses the thread of the screw in uniformly facing the inner side of the casing from the inlet end to the outlet end of the screw compressor (fig. 1); therefore, a degree of compression in the screw compressor is constant from the inlet end to the outlet end.

Regarding claim 16, the mouth is arranged closer to the outlet end of the screw compressor than to its inlet end (fig. 1), so that liquid can be supplied to the matter that passes through the screw compressor when the matter has been exposed to compression over more than half the length of the screw compressor.

Regarding claim 17, the mouth is arranged close to the outlet end of the screw compressor, so that the distance from the mouth to the end of the thread is at most 20% of the length of the screw (fig. 1).

Regarding claim 19, the casing of the screw compressor is, at least over a part of its length, a water-tight casing that is at least essentially impervious to liquid (see the casing section where the sections (A) and (B) of the casing are jointed together (fig. 1)).

Regarding claim 20, the casing of the screw compressor is, at least over a part of its length, a water-tight casing that is impervious to liquid (see the casing section where the sections (A) and (B) of the casing are jointed together (fig. 1)).

Regarding claim 28, the liquid is a washing agent (i.e. liquor) (page 1, right column, lines 46-54).

Regarding claim 29, McDonald discloses the screw compressor in an arrangement as claimed, therefore, the arrangement of the compressor allowing the liquid to supply to the matter when the matter has reached a dry content of at least 35 percent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald.

As to the distance from the mouth to the end of the thread is at most 10% of the length of the

screw, McDonald discloses the distance from the mouth to the end of the thread is at most 10% of the length of the screw. However, it is not inventive to discover the optimum or workable ranges by routine experimentation when general conditions are disclosed in the prior art. *In re Aller, 220F, 2d454, 105 USPQ 233(CCPA 1955).* McDonald does however set forth the general distance of the mouth from to the end of the thread is at most 20% of the length of the screw, and thus it would have been obvious to one having ordinary skill in the art the time the invention was made to discover the optimum or workable ranges for the location of the mouth on the length of the screw in order to achieve the desired compression of the matter throughout the length of the screw compressor before the matter is being washed by the treating fluid from the mouth. Additionally, the specification does not disclose the any advantage for having a distance from the mouth to the end of the thread is at most 10% of the length of the screw.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald, in view of Bussells (US 808,193). McDonald discloses the invention substantially as claimed as set forth above except for the screw and the inner side of the casing are conically tapered towards the outlet end of the screw compressor. McDonald discloses the screw is conically tapered towards the inlet end of the screw compressor. However, the patent to Bussells teaches a screw compressor having a screw (fig. 1) and an inner side of a casing (B) are conically tapered towards an outlet end of the screw compressor (fig. 1) in order to improve the compression of the material to be treated in the screw compressor (page 1, lines 1-84). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide McDonald with a screw and an inner side of a casing conically tapered towards an outlet end of

the screw compressor, as taught by Bussells, in order to improve the compression of the material to be treated in the screw compressor.

Allowable Subject Matter

Claims 22-27 are allowed.

Claim 22 is allowable because none of the references discloses or fairly suggests the method steps of: *supplying a washing agent to the wet matter with a dry content of at least 35%, whereby the washing agent is supplied to the wet matter with a dry content of at least 35% via the rotating screw so that the washing agent is uniformly supplied to the wet matter with a dry content of at least 35%; and additional compressing of the wet matter with a dry content of at least 35%, after the supplying of the washing agent, wherein the washing agent that is supplied to the wet matter with a dry content of at least 35% is pressed axially backwards through the screw compressor towards the inlet end of the screw compressor*, in combination with the rest of the claimed limitation.

Response to Arguments

Applicant's arguments filed February 02, 2006 have been fully considered but they are not persuasive.

With regards to claim 14, Applicant argues that the amended limitation "wherein the screw compressor is arranged so that the liquid that is supplied to the matter that passes through the screw compressor is pressed axiallv backwards through the screw compressor towards the inlet end of the screw compressor" is allowable over McDonald. This argument is not found

persuasive because claim 14 is an apparatus claim and the McDonald reference discloses the screw compressor in an arrangement as claimed, therefore the liquid is being pressed axially backward through the screw compressor towards the inlet end when the liquid contacts a right inner end wall of the screw (16) as set forth in the rejection above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T. Nguyen whose telephone number is (571) 272-4520. The examiner can normally be reached on Mon-Thur 8:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272- 4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTNguyen
April 28, 2006

DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
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